Special Issue

CRISPR-Cas: Interactions with Genome and Physiological Maintenance

Message from the Guest Editors

CRISPR-Cas enzymes provide a growing smorgasbord of tools for genetically altering and editing DNA and RNA through genome editing, for altering cell physiology in bacteria, plants and mammals. Interactions between CRISPR-Cas and host DNA repair enzymes are important for successful genome editing because editing enzymes generate DNA damage sites. These trigger repair systems but can also provoke wider genomic stress with potential to disrupt DNA replication and cell cycle progression. In native cells, CRISPR-Cas adaptive immunity systems functionally interact with DNA repair and genome stability systems, factors that promote building of the DNA-based CRISPR immunity system. Native CRISPR-Cas enzymes also impact on other physiological systems in interesting ways by mechanisms unknown, for example in bacterial biofilm formation. Understanding interplay between CRISPR-Cas enzymes and other host physiologies is a frontier for improving efficacy of gene-editing protocols, furthering understanding of DNA repair in healthcare, and for understanding prokaryotic biology.

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Deadline for manuscript submissions

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Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

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